



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/127,236	07/31/98	ELKINS	OR209

C. MICHAEL ZIMMERMAN
P.O. BOX 50723
PALO ALTO CA 94303

QM61/0527

EXAMINER
LEU, L

ART UNIT	PAPER NUMBER
3/43	

DATE MAILED: 05/27/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/127,256

Applicant(s)
Elkins

Examiner
Leonard R. Leo

Group Art Unit
3743



☒ Responsive to communication(s) filed on Mar 16, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1, 3-6, 8-10, and 12-24 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1, 3-6, 8-10, and 12-24 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on Mar 16, 1999 is ☒ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 3743

Applicant's arguments with respect to claims 1, 3-6, 8-10 and 12-24 have been considered but are moot in view of the new ground(s) of rejection. Claims 2, 7 and 11 have been cancelled, claims 1, 3-6, 8-10 and 12-24 are pending.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-6, 8-10 and 12-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Prior Art Figure 2 in view of Haugeneder.

Applicant's Prior Art Figure 2 discloses all the claimed limitations except first and second lines intersecting at an angle of 70 to 110 degrees.

Haugeneder discloses a heat exchange panel comprising a first layer and second layer having a border seal; a first port 1 and second port 2; a plurality of dot matrix of attachments 3-6 arranged into first and second imaginary lines crossing at 90 degrees for the purpose of achieving a desired heat exchange by providing optimum flow resistance and flow (column 3, lines 43-50).

Since Applicant's Prior Art Figure 2 and Haugeneder are both from the same field of endeavor and/or analogous art, the purpose disclosed by Haugeneder would have been recognized in the pertinent art of Applicant's Prior Art Figure 2.

Art Unit: 3743

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Applicant's Prior Art Figure 2 first and second imaginary lines of dot matrix of attachments crossing at an angle of 90 degrees for the purpose of achieving a desired heat exchange as recognized by Haugeneder.

Regarding claims 2, 7, 11 and 16, Haugeneder discloses the first and second lines intersect with the nominal direction of flow 8 at about 34 degrees (gleaned from Figure 1).

Regarding claims 3-5, 8-9, 12-14 and 17-24, Applicant's Prior Art Figure 2 meets the claimed limitations.

Regarding claims 6-9, the method of manufacturing claims are met by the combination of Applicant's Prior Art Figure 2 and Haugeneder.

Regarding claims 10-14, the method of operating claims are met by the combination of Applicant's Prior Art Figure 2 and Haugeneder.

Regarding claims 15-19, to employ the device of the combination of Applicant's Prior Art Figure 2 and Haugeneder in a well known system (e.g. Elkins et al) requires only routine skill in the art.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In fact, applicant does not offer any arguments with respect to applicant's Prior Art Figure 2. Clearly, Prior Art Figure

Art Unit: 3743

2 discloses a similar device operable in an environment similar to applicant's instant invention as claimed. The only structure lacking from Prior Art Figure 2 is the dot matrix of attachments along imaginary lines intersecting at a range of 70 to 100 degrees. The secondary reference of Haugeneder teaches one of ordinary skill in the art to employ dot matrix of attachments between opposed layers in a panel type heat exchanger along first and second imaginary lines crossing at 90 degrees for the purpose of achieving a desired heat exchange by providing optimum flow resistance and flow (column 3, lines 43-50).

Both applicant's Prior Art Figure 2 and Haugeneder are panel type heat exchangers having a dot matrix of attachments between opposed layers, where a working fluid is circulated therein to transfer heat to the external environment. Depending on the desired working environment, one of ordinary skill in the art would employ a heating or cooling medium as the working fluid to heat or cool the external environment. However, the structure of the panel type heat exchanger would remain the same. Comparing the claimed instant invention with the device of the combination of applicant's Prior Art Figure 2 and Haugeneder, there is no patentable difference. Applicant's Prior Art Figure 2 meets each and every claimed limitation, except the angle between the two imaginary lines of the dot matrix of attachments. However, Haugeneder fairly teaches an angle of 90 degrees between the two imaginary lines of the dot matrix of attachments for achieving a desired flow resistance associated with optimal heat transfer.

No further comments are deemed necessary at this time.

Art Unit: 3743


Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication should be directed to Leonard R. Leo whose telephone number is (703) 308-2611.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 3700 receptionist whose telephone number is (703) 308-0861.


LEONARD R. LEO
PRIMARY EXAMINER
ART UNIT 3743

May 26, 1999